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ROCKS and MINERALS

A Magazine for Mineralogists, Geologists and Collectors

Official Journal of the Rocks and Minerals Association

NOVEMBER, 1942

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THE ROCKS AND MINERALS ASSOCIATION

(Members All Over the World)

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219 E. Main St.
Mt. Kisco, N. Y.

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D. P. Ground, Tooele, Utah

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Dept. of Geology,
Muhlenberg College, Allentown, Penn.

Secretary-Treasurer, Peter Zodac
Box 29, Peekskill, N. Y.

Organized in 1928 for the increase and dissemination of mineralogic knowledge

To stimulate public interest in geology and mineralogy and to endeavor to have courses in these subjects introduced in the curricula of the public school systems; to revive a general interest in minerals and mineral collecting; to instruct beginners as to how a collection can be made and cared for; to keep an accurate and permanent record of all mineral localities and minerals found there and to print same for distribution; to encourage the search for new minerals that have not yet been discovered; and to endeavor to secure the practical conservation of mineral localities and unusual rock formations.

Ever since its foundation in 1928, the Rocks and Minerals Association has done much to promote the interest in mineralogy. It has sponsored outings, expeditions, formations of mineralogical clubs and the printing of many articles that have been a distinct contribution to mineralogy.

Those of our readers who are members of the Association can rightly feel that they too were sponsors of these many achievements that have helped to give mineralogy a national recognition. Among your friends there must be many who would like to have a part in the Association's work—to share with you the personal satisfaction, the pleasure, and the benefits of membership. Will you give your friends this opportunity to join the Association by nominating them for membership?

Each new member helps to extend the Association's activities—helps to make your magazine larger, better, and more interesting, and above all assists in the dissemination of mineralogical knowledge.

Some advantages of memberships: All members in good standing receive:

(1) **Rocks and Minerals**, a monthly magazine. (2) A member's identification card that secures the privileges of many mines, quarries, clubs, societies, museums, libraries. (3) The right to participate in outings and meetings arranged by the Association. (4) the right to display a certificate of membership and to place after their names a designation indicating their membership or to advertise membership on stationery, etc. (5) The distinction and the endorsement which comes from membership in the world's largest mineralogical society.

Mineralogical clubs which subscribe for **Rocks and Minerals** also become affiliated members of the Rocks and Minerals Association and enjoy all the advantages which such an affiliation affords.

A number of clubs hold membership in the Association, participate in the annual outings, and co-operate in many ways in furthering the aims and ambitions of the Association.

Affiliation with the world's largest mineralogical society cannot fail to increase membership, enlarge circles of acquaintanceship, and stimulate a keener interest in mineralogy.

A list of affiliated clubs will be found among the back pages of the magazine.

ROCKS and MINERALS

PUBLISHED MONTHLY

Edited and Published by PETER ZODAC

November 1942

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ROCKS and MINERALS PEEKSKILL, N. Y., U. S. A.

The official Journal of the Rocks and Minerals Association

Chips from the Quarry

A NEW PRESIDENT FOR THE ROCKS AND MINERALS ASSOCIATION

On Oct. 1, 1942, Rocks and Minerals Association acquired a new President due to the recent resignation of R. Emmet Doherty. There was no casting of ballots nor any publicity given (due to present war conditions)—a member was selected and unanimously approved by the officers of the Association.

Mr. Doherty had served the Association faithfully and well for the past six years. But his new duties with one of the largest coal mining companies of the country, at Wilkesbarre, Penn., have drawn him away from the Association's headquarters and, also, do not allow him much time to devote to Association's matters. He was forced, therefore, to resign his office.

Our new President is Oscar W. Bodelsen, of Mt. Kisco, N. Y. Mr. Bodelsen is so well known to collectors and members of the Metropolitan district of New York that to them he needs no introduction. Since the majority of our members do not reside in the district, a few words about our new President may be in order.

Mr. Bodelsen is a druggist whose drug store is at 219 E. Main St., Mt. Kisco. He has been a mineral collector for many years, specializing in silver ores and minerals. Some few years ago he purchased the famous Amend collection (Mr. Amend was a member of the noted drug and chemical firm of Eimer and Amend, of New York City), which contained several thousand fine specimens and many duplicates. Most of the duplicates have been acquired by visiting collectors, as Mr. Bodelsen is very generous with his specimens. This very fine collection is housed in a series of cabinets in the rear of the store.

Mr. Bodelsen is a liberal buyer of fine specimens and a most active field collector. He has visited hundreds of localities in many states of the Union and has collected a large number of unusually good specimens. One of his most noted achievements was the rediscovery of the famous monazite-fibrolite locality near Yorktown Heights, N. Y., which had been lost for many years. It was the thought of many collectors that this locality lay far down below the waters of the New Croton Reservoir—but Mr. Bodelsen thought otherwise and proved his point.

The Association is most fortunate in having Mr. Bodelsen guide its destinies from now on. He is a man of most pleasing personality, an untiring and conscientious worker, and with many good ideas for the welfare and growth of the Association. We are very sure that all members join us in extending to him our best wishes.

Peter Zodac

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The Official Journal of the ROCKS and MINERALS ASSOCIATION

Whole No. 136

MICRO MINERAL MOUNTS

Preparation and Mounting Technique

By JAY T. FOX

Fox Museum of Natural History
Seaford, L. I., N. Y.

The first reference to Micro Minerals appears in an old book entitled "Micrographia of Minute Bodies made by Magnifying Glasses", by Robert Hooke, of London, England, in the year 1667. He mentions viewing tiny crystals in a cavity of Flint, and from the wood cut illustration it leaves no doubt that the crystals he observed were symmetrical Quartz. As he was not a mineralogist he could not identify them.

Little of importance appears in old writings on this method of mounting until the year 1848, when a reference appears in "Microscopy" by John Quekett, of London, which mentions the mounting of opaque objects on corks in round pill boxes. It was not until 1870, however, that two American Naturalists working independently of each other, published data on the Microscopical aspects of opaque mineral masses. One, the Rev. George Gilbert Rackstraw, of Cornwall, Penn., the other Mr. George Washington Fiss of Philadelphia, Penn. Their first efforts at mounting Micro Minerals differed greatly from the accepted method of to-day. Standard glass slides were used upon which were cemented round brass, hard rubber or ivory cells. These cells contained the Micro Mineral specimen and were generally protected with a cover glass. This method was discarded when Rackstraw started mounting his specimens in rectangular paper boxes. Fiss adopted Quekett's method of mounting his specimens on small round corks. For many years thereafter the common term for minerals thus mounted was "Rackstraws". About 1890 the shape of the box was standardized and the 1" square box came into use. The term "Micro Mineral Mount" is comparatively new.

Today's accepted definition of a Micro Mineral Mount is: a small opaque mineral mass cemented to the top of a small cork, which in turn is cemented to the inside base of a 1" square paper box that has a good fitting cover.

The study of Micro Mineralogy opens to all Microscopists a new stage setting of knowledge and beauty. In this work, the Microscope plays the leading role. Nature rarely forms perfect crystallizations. To properly study and view the minute structural details of complicated crystal formations, a microscope must be employed. Minute crystals under magnification show a new and unusual appearance. One crystal formation often disturbs the formation of another, indicating prevalence of peculiar conditions during formation. The sparkling array of colors and unexpected hidden beauty of Micro Mineral material, can only be appreciated when properly illuminated by incident light and observed thru a good Microscope. The use of a Binocular type Microscope is recommended as it has many advantages over the Monocular type. Principally, less fatigue for the observer and minimum eye strain. It also gives stereoscopic vision which reveals much more detail as to structure of the minerals and crystals. They stand

out in striking plastic relief. With Monocular vision stereoscopy is impossible. Another point worth mentioning; when looking thru a Binocular Microscope the mineral specimen is seen in its true position, not inverted nor reversed. When viewing Micro Minerals, I find a magnification of 18x to 25x gives the best results.

Source of Supply of Micro Material:

1—*Mines and Quarries:* Careful searching of the dumps adjourning a mine or quarry always yields a goodly supply. As a rule small chips abundant with crystals are passed over by collectors of cabinet sized specimens.

2—*By exchange:* By bartering or trading for Micro Material with other ardent enthusiasts, one's personal collection is forever changing and increasing.

3—*By purchase:* To-day, due to the popular demand for Micro Mount material, several reputable dealers are making a special effort to supply the demand.

Invariably tiny bouquet clusters of needle sharp crystals are concealed in hidden fissures and cracks or imbedded in vugs in the interior of a mineral mass. When these newly exposed surfaces are brought to light for the first time by proper trimming, fascinating miniature grottos of impressing beauty are revealed.

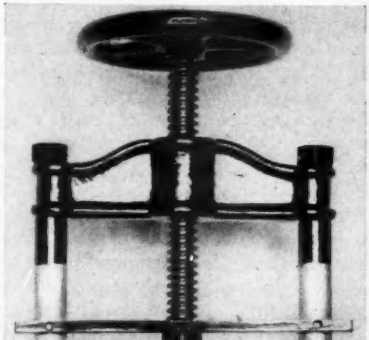
A rock or mineral trimmer is indispensable for breaking up large specimens. This apparatus consists of nothing more than a powerful screw press fitted with chisel pointed jaws. Fairly good results can be obtained by fitting the jaws of a heavy machinist's vise with suitable chisel faces of hardened steel. The hammer and chisel method rarely proves successful; the heavy blow required to break the mineral mass, usually jars the delicate crystals from their matrix.

A 24″ x 36″ work table with protecting side and rear boards, and compartments along the back portion to hold preparation equipment keeps the working materials readily accessible and orderly. An electric light fixture on a swinging bracket can be attached to the side of the table. It should be fitted with a metal reflector to adequately illuminate the working space.

A flat piece of metal about 4″ x 6″ can be fastened to the top of the metal reflector to serve as a drying platform. The radiated heat from the lamp can thus be utilized to hasten the drying process of the specimens after washing, cementing or lacquering.

Tools and equipment:

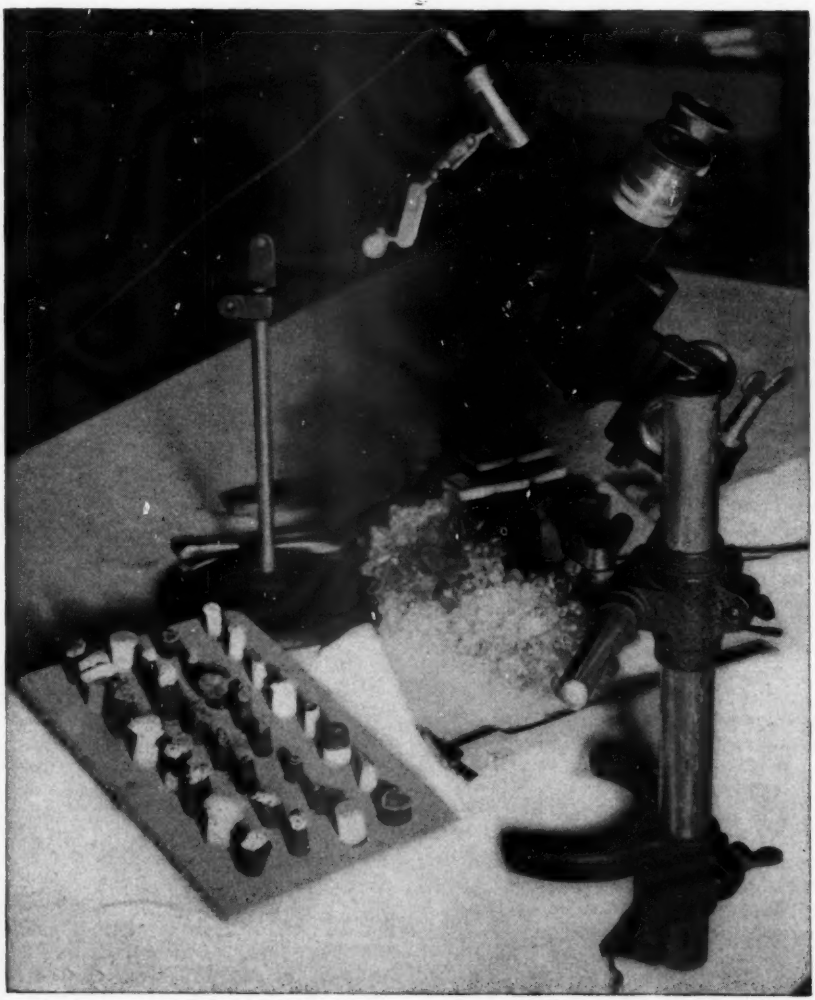
3—Scalpels, for shaping tops of corks
1—Pair 4″ Forceps, for handling specimens
1—Pair 6″ Forceps, for handling specimens
6—Micro dissecting needles in wooden handles
1—Hand lens, 10x or 15x, for quick inspections
1—Pair pliers, end cutters, for shaping specimens
1—Thin bladed sharp knife, for cork cutting
6—Camel hair brushes, various sizes for lacquer
1—Can flat black lacquer
1—Can lacquer thinner
1—Tube Dupont's Household cement
1—Bottle India Ink and pen, for labels
1—Small bottle liquid soap
Misc. sized corks



Micro Mineral Trimmer

Quantity of 1"x1" paper boxes with covers.

When the selected mineral has had a preliminary inspection under the Microscope lens and the best part for a Micro Mount determined, it is then carefully trimmed or cleaved to free the desired portion. Prior to mounting the trimmed portion, it must be cleaned of all foreign matter. For minerals not soluble in water, a gentle stream of cold water from a tap will usually suffice Others may require gentle brushing with a soft Camel hair brush and liquid soap, followed by a rinsing of cold water. Where the crystals are Acicular, Capillary or Filiform, like the Stibnites, Natrolites, Malachites, etc., and a stream of running water is apt to be too strenuous, one must resort to blowing on them gently



Micro Mineral mounts in course of preparation.

to dispose of the debris. Specimens that are soluble in water, like, Halite, Rossite, Natrocalcite, etc., can be readily cleaned by dipping them a few times in 95% alcohol. It is suggested that *"Dana's Mineralogy"* be consulted as to the solubility of the various specimens for occasionally a mineral is encountered that is soluble in both water and alcohol. After washing has been completed all specimens must be thoroughly dried before fixation to their respective corks.

Corks of various sizes are required to serve as bases for the specimens. When the proper sized cork has been selected for the chosen mineral, proceed to shape the top surface of the cork to fit the more or less uneven bottom of the specimen.

It is then cemented to the top of the shaped cork. After much experimentation I find Dupont's Household Cement the best medium. It comes in a collapsible tube, is transparent, and a quick dryer. When dry it is both alcohol and water proof. If in the event some of the cement accidently comes in contact with the crystal surface of the mount, it can readily be removed with Benzol.

The next operation is to blacken the cork. A flat black lacquer proves the best applicant. When dry it leaves a dull black non-reflecting finish. This feature helps immeasurably when the specimen is illuminated; for without glare the mineral stands out in bold relief. Spear the cork on a dissecting needle. Apply the lacquer with a soft Camel hair brush to the sides and top surface of the cork around the cemented specimen. Now place it atop the aforementioned drying platform. When dry it will be ready for permanent mounting in one of the boxes.

The dull black papered box measures 15/16" x 15/16" x 11/16". The white glazed lid is red paper boarded and measures 1" x 1" x 11/64".

When the specimen is permanently mounted in one of these boxes, the surface of the mineral on the cork should come just below the rim of the box. It is very essential that the top surface lie as nearly as possible in the focal plane of the microscope objective. A careful measurement is made to see exactly how much of the bottom of the cork has to be removed. When this measurement is ascertained, proceed to remove excess cork.

Prior to permanently cementing the mount in the box: a final check is made. Slowly pass a hair or bristle across the rim of the box to make sure of the proper clearance. Now spread a little cement on the bottom of the cork and place it in the exact center of the box. The completed mount is again set on the platform to dry. A Micro Mount boxed in this manner will last indefinitely.

Incomplete conclusions often result from too few or too incomplete observations. To offset this I use an orientation device, known as a Ball-socket stage. It consists of a 6" weighted hemispherical base which has a 1" x 1" recessed square hole in the exact center of the flat surface to accommodate a Micro Mount Box. The curved bottom of this hemisphere fits into a socket mounted on a base platform. With this arrangement the mount may be oriented and any portion of the specimen may be easily observed.

The cover of the box is now ready for a full penned description of the specimen within: the name of the mineral, the locality from whence it came and the date of acquisition. For this recording, black India ink is most ideal. The mounts must also be numbered. A corresponding number on the cover and the base of the box prevents the misplacement of covers.

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MINERALS OF RIVERTON, VIRGINIA

By A. C. HAWKINS

In 1940 two fine new bridges were constructed over the North and South Forks of the Shenandoah River at Riverton, in Warren County, Virginia. The bridges are on Route U. S. 522, about two miles north of Front Royal, Virginia. At the approach to the north end of the North Fork bridge the road passes through a deep cut in Martinsburg shale of Ordovician age. This is at the base of the shale formation; the Chambersburg limestone lies below and immediately to the east of it. In widening the road at this point a number of narrow calcite veins were encountered which also carry other minerals in crystals of small size but very considerable interest. This is not a unique occurrence, for at the same geological horizon there are usually calcite veins. Most of these contain nothing else, as in the exposures along Opequon Creek, east and northeast of Winchester. One locality, however, namely, the one where there is a working quarry on Route 211 a few miles southwest of Luray, affords beautiful little purple fluorite crystals along with the calcite.

The veins at Riverton have ragged sawtooth edges and evidently were produced by movement of one wall of shale against the other in such a manner that open cavities remained at certain places. In these cavities, small crystals were formed from water solution. The following well-crystallized minerals appear: Quartz, barite, marcasite, pyrite, and calcite.

The quartz is present in long, slender, well-terminated, tapering prisms. Many are curved, being built up of several individual crystals, united either lengthwise, or in parallel. Some crystals are thin and flat and form fins on the sides of the long prisms. All are colorless and transparent; most of the prisms are 2 to 3 mm. long; they grew from the matrix at right angles. Individual calcite crystals are attached to some of them.

The most interesting mineral in the deposit, barite, appears in transparent to translucent, milky to pinkish colored crystals, many of which are 3 mm. long and 1 mm. thick. These are stout crystals of the habit of those from Sterling, Colorado, and Cumberland, England; a simple combination of the unit domes with the unit prism and base. Others of this type have complicated forms; study on the 2-circle reflecting goniometer shows a large number of unusual crystal forms. Crystals of a second type are flattened parallel to the basal plane. All of these are attached to the matrix by an acute angle (the end of the *b* axis) so that they stand up in the attitude of the diamond on a playing card. They are associated with cubes of pyrite and nailhead calcite crystals.

The marcasite crystals are prismatic, 1 to 2 mm. in length, with simple pyramid terminations. They have grown in various positions on the quartz. Many of them are united in pretty little symmetrical v-shaped twins; a few have a third crystal bisecting the v, forming a trident. Individual pyrite cubes about 1 mm. in diameter have grown on many of the marcasite crystals. The pyrite crystal is not in parallel position with respect to the crystal of marcasite. In a dozen cases observed, the pyrite is quite uniformly just about 1/3 of the length of the marcasite prism, below its summit.

Calcite crystals, which have grown at a later date than most of the other minerals present, are transparent to slightly milky. They have the nailhead form, which is the ordinary combination of the prism with the low-angle rhombohedron *e*.

This mineral occurrence afforded some pretty box-mount material, which the writer was lucky enough to obtain during a couple of chance trips from far-away places. But alas, there isn't any more. All that remained at the locality was promptly and completely covered up in the fill under the highway beyond the north end of the bridge.

SOLOMON ISLANDS LITTLE KNOWN

Solomon Islands, that little known archipelago of the western Pacific Ocean where our marines recently won a decisive battle over the Japs, consist of a group of islands extending in a direction from northwest to southeast between lat. 5° and 11° S. and long. 154° 40′ and 162° 30′ E. The group, which is about 500 miles east of the large island of New Guinea, consists of seven large islands and quite a number of small ones for a total area of 17,000 sq. miles. The most important islands are Bougainville, Choiseul, New Georgia, Santa Isabel, Malaita, Guadalcanal, San Cristobal (San Cristoval), Buka (Green), Rennell, Florida, and Rendova.

There are mountains of considerable height in many of the islands. The shores, however, are generally low in some places bordered with mangrove swamps and lined with coral reefs. The largest island of the group, Bougainville, (area 3,860 sq. miles), contains two active volcanoes, one of which, Mount Balbi, is 10,000 feet in height (in the northwestern part of the island in the Emporer Range). Hot Springs are also known to exist. Bougainville Strait separates it from Choiseul Island on the southeast. Population of all the islands is estimated at 200,000 of which 60,000 are on Bougainville. Kieta, a seaport on the southeast coast, is the chief town of Bougainville. Guadalcanal is densely wooded and has an active volcano.

The small island of Florida, whose chief town is Tulagi, is about Midway between the three islands of Santa Isabel, Malaita, and Guadalcanal.

The Solomon Islands are east of New Guinea and northeast of Australia

Courtesy, *Peekskill Evening Star*

The Solomon Islands form one of the least known groups in the world—islands which most Americans had never heard of prior to the present war. And of all the islands known to seafaring men, the Solomons are the most feared and hated. The climate is moist and unhealthy, the jungles and swamps are full of vicious insects and poisonous snakes, earthquakes are frequent, but worse still—the natives are very treacherous and great precaution must be taken when visiting the islands. Formerly the natives were fierce cannibals and many still are, especially those in the interior of the oblong-shaped islands, as for instances the bushmen who live in the hills of Malaita. Under these conditions few men, outside of traders and missionaries, visit the islands and they never penetrate the interior.

Of all the natives on the many islands of the vast Pacific Ocean, those of the Solomon Islands are the most treacherous and bloodthirsty. It is no wonder, then, that these islands are so little known as most ships give them a wide berth. Because the islands are of volcanic origin, the chances are good for many minerals to occur there. But who will do the investigating and prospecting? A few ships do visit the islands at irregular intervals to obtain tortoise shell, copra, cocoanuts, and other products but very few white men venture far into the interior. Now that the American marines are strongly entrenched in the islands, much valuable data on the mineralogy and geology of the Solomons should be forthcoming.

The islands were discovered and explored in 1568 by Alvaro de Mendana, a great Spanish navigator. He thought that they were very fertile and rich in gold (which had to be found first) and in his desire to colonize them, he called the group Solomon Islands (after King Solomon of biblical days). On reaching Spain he gave the islands much publicity, proclaiming them as the source from which King Solomon had obtained his vast store of gold. He was successful in raising a large sum of money for colonizing purposes and on his return journey to the islands, with a large number of colonists, he could not find them (owing to the imperfect instruments he had used in locating them), and his colonizing plan never materialized as he soon died. The islands were then "lost" for about 200 years until they were rediscovered by the French explorer, Bougainville, for whom the largest island was named.

Even though gold has never been found in the Solomon Islands, the thought that rich deposits must occur has never died out and someday some adventurous inividual will explore the interior and may find it—if it is to be found.

FLUORESCENT STREAK OR WHAT?

By B. M. BREHM
Warren, Ohio

While using my saw the other night, I noticed a peculiar luster on it after it had passed thru the stone. The story is: On my diamond saw I use a mixture of kerosene and a small amount of light oil. The stone I was cutting was a gemmy piece of Willemite. When I noticed the peculiar luster on the saw after it had cut through the Willemite, I turned out the light and the peculiar luster turned into the most beautiful green, a kind of sparkle at the edge of the cut and following the saw on down into the oil like a streak. The effect was most interesting because it was the first time I ever noticed such a phenomena. (I often turn out the light to see the sparks thru a clear stone to see how the saw is cutting and whether the sparks are of even striking).

Try a Willemite sometime and see if you get the same effect. As the Willemite is highly fluorescent, I am wondering if that green streak wouldn't be a different kind of fluorescence. Still I've cut other fluorescent material and never saw anything like this before. What do you think?

SOME MINERALS OF LOUISIANA

Though the state of Louisiana ranks high in the production of minerals, in 1939 ranking 7th in the Union for a total value of $168,902,949, it practically is unknown for nice mineral specimens and especially crystals. Its principal commercial minerals, according to the U. S. Bureau of Mines, *Minerals Yearbook for 1940*, (p. 22), in order of value are petroleum, natural gas, sulphur, and natural gasoline. Nevertheless some interesting specimens are found within its borders and these come chiefly from two mineralized areas—the limonite deposits of the northwestern part of the state and the salt deposits of the southern part.

LIMONITE DEPOSITS

The limonite deposits are in Caddo, Bossier, and Webster parishes (a county in Louisiana is called a parish). Near Greenwood, Caddo Parish, many nice limonite geodes, grading up to 8 inches in diameter, are found. Some of the geodes contain sand and they rattle when shaken—hence are "rattle boxes". Clay ironstones (impure siderites) are found on the beach along the south shore of Caddo Lake, at Mooringsport, Caddo Parish.

A deposit of rather impure limonite occurs 2 miles south of Shongaloo, Webster Parish, associated with conglomerate which contains pebbles of chert and milky quartz.

Good specimens of concretionary and nodular limonite occur west and southwest of Plain Dealing, Rocky Mount (found in sand which is slightly glauconitic), Benton, and Bodcau Lake, all in Bossier Parish. The deposit at Bodcau Lake occurs northwest of the site of the former town of Bellevue and produces many fine limonite geodes which often are rattle boxes.

LIMESTONE QUARRY

A limestone quarry is located 5 miles west of Winnfield, Webster Parish, where a much fractured bluish-gray banded, irregularly crystalline, limestone is worked. This rock contains considerable coarse crystalline calcite which is locally termed marble. Minute crystals of barite are often found attached to the calcite.

SULPHUR MINES

The sulphur mines of southwestern Louisiana, esecially in the neighborhood of Lake Charles, Calcasieu Parish, are of great economic importance. However, they furnish little if any specimens as the sulphur is not mined in the ordinary manner. Hot steam, forced down through bore holes, melts the sulphur which is then pumped out and allowed to flow into huge vats where it is allowed to cool and crystallize. Small crystals of sulphur and other minerals are often found in the core borings of the many holes sunk.

SALT MINES

The salt mines of Iberia and St. Mary parishes, in southern Louisiana, are the state's most important mineral localities. The chief mines are located near the coast, extending along a line bearing S. 49° E. from a point 10 miles west of New Iberia, to the mouth of the Atchafalaya River, on five distinct mounds known as the "Five Islands (or Salt Islands) of Louisiana". These are Jefferson Island (Cote Carline), Avery's Island (Petite Anse), Weeks Island (Grande Cote), Cote Blanche, and Belle Island.

The name "island" has been applied in southern Louisiana to small domes or mounds that rise out of the marshes which are often dry but sometimes flooded with water. These mounds, protruding above the neighboring marshes to a height of over 150 feet, are the highest elevations along the coastal plains of Louisiana and Texas. The salt in these mounds is mined by shafts which generally pass through clay, sand, gravel, limestone, sulphur, anhydrite (Cap rock), and into the salt. It is in the Cap rock (which varies from a few feet to several hundred feet in thickness) that the larg-

est number of minerals occur; these minerals are calcite, galena, gypsum, pyrite, sulphur, etc. (The cap rock caps or covers the salt body or core).

Jefferson Island (Cote Carline). This mound is known by a number of names but Jefferson Island is the most popular because it was once the winter home of the famous actor, Joseph Jefferson. It is the most northwesternmost of the Five Islands and is on the boundary line of Vermilion and Iberia parishes (29°59′ N. Lat. and 91°58′ W. Long.). It is about 9 miles west of New Iberia (a village of about 9,000 pop.). Its area is approximately 310 acres. Salt (halite) was discovered here in the summer of 1895 at a depth of 334 feet. Lignite has also been found here.

Avery Island (Petite Anse): This mound is in western Iberia Parish (29°55′ N. Lat., 91°54′ W. Long.). It is about 8 miles southwest of New Iberia.

Avery Island, as one approaches it over the level terrain, looms up as a thickly wooded series of hills whose highest elevation is 180 feet above sea level. The island is about 3 sq. miles in area. Halite, mined here, is often as clear as ice. Very fine halite crystals and transparent anhydrite crystals occur here; a bed of lignite was also found near the mine.

Weeks Island (Grande Cote). This mound is located on the eastern shore of Weeks Bay, an eastern lobe of Vermilion Bay, in southwestern Iberia Parish. It is about 13 miles south of New Iberia. It is called Grande Cote on account of its size (largest of the Five Islands), being about 2 miles in diameter. Its geographical location is 29°48′ N. Lat., and 91°49′ W. Long. Chert pebbles have been found in sand below the surface clays. Transparent anhydrite crystals occur here and layers of lignite have been found just above the salt in some well borings.

Cote Blanche. This mound occupies the geographic center between the two extremes of the Five Islands. Jefferson Island on the northwest and Belle Island on the southeast. It is in the northwestern part of St. Mary Parish, 18 miles southeast of New Iberia. It lies near the north shore of Cote Blanche Bay. It is approximately circular and ranks third in size, having an area of 1,400 acres. Its geographical location is 29°45′ N. Lat. and 91°43′ W. Long.

Belle Island: This is the southeasternmost of the Five Islands and is 8 miles from the mouth of the Atchafalaya River. It is 40 miles southeast of New Iberia (in southeastern St. Mary Parish—29°32′ N. Lat. and 91°24′ W. Long.). The island is roughly triangular in shape and contains about 360 acres.

Barite, chalcopyrite, galena, pyrite, and sphalerite, in crystalline masses varying in size from 1 inch up to a foot or more, and large halite crystals occur here (some of the crystals are very fine in quality). The salt core at this mine is over 2,000 feet thick.

OTHER MINERAL OCCURRENCES

Quartz (Petrified wood). Fossil palmwood, grayish color, occurs in the hills of western Louisiana around Natchitoches, (in central Natchitoches Parish). The wood is very common in the area and some logs range up to 600 lbs. in weight.

Gypsum (Selenite): Nice crystals, up to 3 inches in length, occur in the clay around Olla, in northwestern La Salle Parish, (central Louisiana). (Personal communication from Mr. Shelton Cruse, of Olla, La.)

Muscovite: Flakes up to 2 inches square found in rocks around Olla (Mr. Cruse).

Mr. Cruse (now a private in the U. S. Army) states that a lead mine, worked many years ago, is said to exist in the Chalk Hills, about 5 miles west of Harrisonburg, in northern Catahoula Parish (eastern Louisiana).

REFERENCES

Useful minerals of the United States. Compiled by Frank C. Schrader, Ralph W. Stone and Samuel Sanford, U. S. Geol. Survey Bull. 624, Washington, 1917, pp. 144-145.

Salt Resources of the United States. By W. C. Phalen, U. S. Geol. Survey Bull. 669, Washington, 1919, pp. 101-116.

(Continued on page 389)

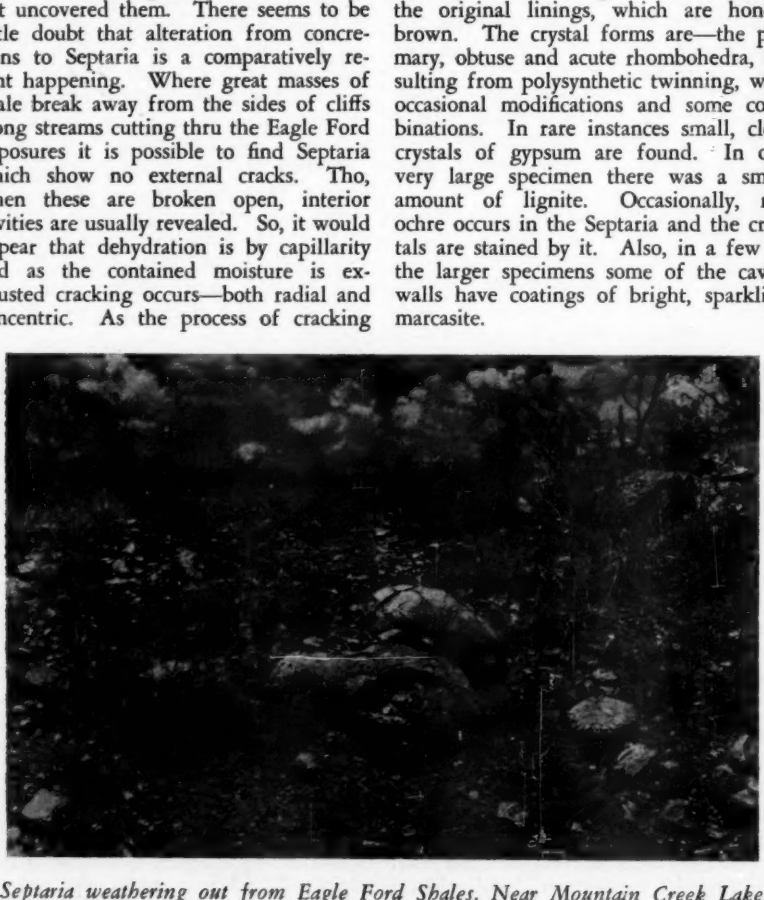
THE EAGLE FORD SEPTARIA OF TEXAS

By JNO. B. LITSEY

In the Eagle Ford Shales (Cretaceous) which outcrop, rather extensively, in Dallas County and other Texas Counties Septaria occur, abundantly. These are locally known as Turtle Stones and they range in size from an inch or two up to large ones of four or five feet in greatest diameter.

Originally, they were merely concretions and remained as such, notwithstanding the matter of increment, thru the long period from the time they were formed or started growth until erosion all but uncovered them. There seems to be little doubt that alteration from concretions to Septaria is a comparatively recent happening. Where great masses of shale break away from the sides of cliffs along streams cutting thru the Eagle Ford exposures it is possible to find Septaria which show no external cracks. Tho, when these are broken open, interior cavities are usually revealed. So, it would appear that dehydration is by capillarity and as the contained moisture is exhausted cracking occurs—both radial and concentric. As the process of cracking extends to the exterior, some channels are evidently left open and material from the core leached out; as some of the larger ones have cavities a foot or more in diameter. Eventually, most of the cracks are filled with crystalline calcite; especially, the outer ones.

The cavity walls of even fair sized Turtle Stones are lined with close-set tufts of acicular calcite crystals. In nearly all specimens there is a secondary deposition of larger calcite crystals. Invariably, these are lighter in color than the original linings, which are honey-brown. The crystal forms are—the primary, obtuse and acute rhombohedra, resulting from polysynthetic twinning, with occasional modifications and some combinations. In rare instances small, clear crystals of gypsum are found. In one very large specimen there was a small amount of lignite. Occasionally, red ochre occurs in the Septaria and the crystals are stained by it. Also, in a few of the larger specimens some of the cavity walls have coatings of bright, sparkling marcasite.



Septaria weathering out from Eagle Ford Shales, Near Mountain Creek Lake, Dallas County, Texas.

Under the longer waves of U. V. much of the calcite found in the Septaria is fluorescent—from white thru cream, yellow, orange, reds, pink, greens and rarely blue or blue-green. Some specimens exhibit a rather nice phosphorescence.

When the Septaria have been completely exposed disintegration sets in, rather rapidly, unless the original shale has been indurated. In most instances they simply split along the lines of cracking, rarely weathering out, completely, leaving the cell lattice, intact.

FIELD MUSEUM CONTRIBUTES 28 TONS OF SCRAP METAL

Field Museum has contributed 28 tons of scrap metal to help America win the war. The last 8-ton pile of scrap, systematically collected from all over the huge building housing Field Museum of Natural History, Chicago, Ill., was removed Thursday, October 8, for conversion into weapons to be used against the nation's enemies, it was announced recently by Orr Goodson, acting director.

Previous contributions amounted to 20 tons of scrap iron, steel, bronze, copper, zinc, and lead, as well as several hundred pounds of rubber. The museum administration foresaw the war need of these materials before the present drive began, and undertook to collect and dispose of its scrap months ago, Mr. Goodson stated.

The present 8-ton pile is the result of an intensive survey in which every possible item that was overlooked before, and every new item of scrap which has become available, has been collected, according to William H. Corning, general superintendent of the museum building. Included are discarded condensation-receiving tanks, plant-leaf reproducing machines and molds once used in the laboratories of the department of botany, steel I-beams remaining from construction projects, old radiator covers, tubular iron frames once used by taxidermists in modeling manikins for mounting animal skins, bronze standards, molds and bearings, worn-out machinery of various types, pipes, and railings. In previous loads the museum disposed, among other things, of an obsolete collotype printing press which alone weighed three tons.

SHIPMENT OF CALIFORNIA TIN ORE

Walter W. Bradley, State Mineralogist, has recently received a report by W. B. Tucker and R. J. Sampson, Division of Mines district mining engineers, on a 25-ton shipment of tin ore from the Evening Star Mine near Cima, San Bernardino County, California.

This reported shipment of tin ore is the first recorded from California in fourteen years. The ore was consigned to the Tin Processing Corporation, a federal agency, in Texas City, Texas, where Bolivian tin is being smelted.

Samples reported taken by the above agency upon receipt of the shipment gave the following results on analyses by the firms listed:

Tin Processing Corp.	6.25% Sn.
Ledoux, New York	6.40% Sn.
Chas. C. Kawin Co., Chicago	6.16% Sn.

The mineral present is cassiterite, the tin oxide.

Considerable work has been done at the Evening Star, resulting in about 600 tons of ore on the dump reportedly averaging 2% in tin. This ore would hardly pay to ship since the long-frozen price of tin at 52c per lb. was originally based upon huge British open-pit placer operations and coolie labor.

Prior to a small production of California tin recorded in 1928-1929, a period of some thirty years elapsed since the previous tin production in the eighteen nineties.

THE LEAD MINES OF GALENA, ILLINOIS

By HARRY W. MAUNTEL
Mendota, Illinois

A visit to old Galena in Jo Davis county, called the Little Switzerland of Illinois, affords a pleasure to all nature lovers that is beyond bounds. Especially is this true during the bright, crisp autumn days when the leaves are turning to bright reds and yellows. Galena is truly a picturesque and historic city perched on the hillsides along the Galena river. At one time Galena was a rival of Chicago on Lake Michigan. That was back in the good old lead mining days of the forties.

It is interesting to note that Galena was named by Richard Chandler because of the abundance of the mineral sulphide of lead found in the vicinity. In 1827 Hezekiah H. Gear came to Galena and by terrible hardships finally opened up a mine near the settlement and accidently discovered a bonanza of lead deposits. This discovery caused many miners to drift into this region to mine for lead. By 1845 fifty-four million pounds of lead were shipped from the Galena region. During Galena's Golden Decade, from 1840 to 1850, many noted men came to this region to prospect and mine lead. Truly, this area became the greatest lead mining region in the world. It has been stated that ninety-five per cent of the bullets used in the Mexican and Civil Wars were made of lead mined in the Galena region.

Lead mining played an important part in nicknaming the State of Illinois the "'Sucker State." It seems that the name sucker was applied to those native miners who migrated seasonally, during the spring, to Galena to mine lead and left to go south with the approach of the cold winter days. This corresponded with the species of fish called the suckers which did likewise in this region, coming up the smaller streams to spawn in the spring and returning south by way of the Mississippi or other rivers in late summer or autumn. So did these transient lead miners come and go with the suckers.

With the discovery of gold in California, the growth of the neighboring city of Chicago to the east, the sagging price of lead, and the growth of railroads, the Galena lead district hit a sag and commercial life began to decline. Galena still remained an important city of northwestern Illinois, but it had lost its chance to become the metropolis of the west.

For quite a time lead mining became secondary and in the later eighteen hundred and early nineteen hundred it was thought that the lead mines were exhausted.

It is true today that the lead can only be reached by installing pumping machinery to get rid of the water for one must sink shafts deeper in the earth to get at the metal. It is still there, in paying quantities, and of a good quality. As one travels over the various highways leading out of Galena, north to Hazelgreen, Wisconsin, over State route No. 80, or east to Stockton by way of Elizabeth, route U. S. highway No. 20, one passes many old mine dumps rich with specimens. There are quite a number of old diggings along the gravel roads off the main beaten highways which hide interesting lead and zinc specimens along with some very showy pyrites coating limestone, beautiful enough to grace any show case collection. In some instances one can, by very careful observation and searching, find limestone specimens which include galena crystals interspersed with calcite and varicolored pyrites coating limestones. Some of this calcite occurs in large and good cleavages; others occur in rather showy crystals, called "tiff" by local miners and residents. In one instance a very perfect crystal of galena about one inch long was found imbedded in a very soft sandstone. This alone was very interesting as it was so different from any of the other specimens. Much of the galena is nearly pure coming out in huge groups of crystals several inches across.

Today with our metal shortages there is that old urge to again mine lead. As a result there can be seen again, along the mentioned highways and byways, fresh diggings and new mining structures dotting the landscape. Yes, the specimens are plentiful and showy and the miners and foremen are ready to assist the serious minded collector who presents proper credentials.

Inquire of any resident of Galena about the lead mines and you will be a welcomed visitor to that part of Illinois that the glacier passed up.

Among the minerals which occur in the leads mine of Galena, many fine specimens of which have been found, are:

Calcite: White, crystallized, with crystallized galena.
Cerussite: Crystallized.
Galena: Crystallized (fine specimens).
Marcasite: Some of the finest specimens known have been found here.
Pyrite: Crystallized.
Sphalerite: Crystallized.

Rusty Scrap Is Best Type

Most folks would not believe it—but rusty scrap metal is the best kind.

Several people have remarked: "That scrap is no good. It is too rusty." Recently Herbert Haley, chemist, explained that rusty scrap is the best kind and the type the blast furnaces need.

"When iron ore is smelted," Mr. Haley stated, "there are several impurities which remain in the pigs, including sulphur, phosphorus and silicon. They make iron brittle. Getting rid of them is a tough job and that is where scrap comes in.

"Most all scrap is rusty. Roughly, rust is iron oxide. Oxygen from the air unites with the iron and you have rust. When this rusty scrap is melted down with pig iron the excess oxygen is freed. It unites with the sulphur, phosporus and silicon and 'burns' out these impurities.

"That is the real reason for scrap. Scrap is not needed because there is insufficient iron ore. It is needed to get rid of the impurities. And the rustier the scrap, the better it is."

Peekskill Evening Star, Tues., Oct.6, 1942.

A Message from President Bodelsen

Oct. 3rd, 1942. Mt. Kisco, N. Y.

Mr. Peter Zodac, Secretary,
Rocks and Minerals Association,
Peekskill, N. Y.

Dear Mr. Zodac:

I have received your letter advising me of my appointment to the office of President of the Rocks and Minerals Association.

My appreciation of this honor I can hardly attempt to describe.

I can only hope that in this office I may be of some small assistance toward the advancement of the Association.

I can only strive to emulate that spirit which I have observed in those fellow members whom it has been my pleasure to meet, always one of great cordiality and eagerness to assist.

With such a spirit prevailing it seems certain that we are headed toward an even greater future.

O. W. BODELSEN,

BUY MORE MINERALS but buy good minerals. Our advertisers carry nothing but the best in stock.

SOUTHERN CALIFORNIA LOCALITIES

By JACK SCHWARTZ

656 South Hendricks Ave., Los Angeles, Calif.

1. TICK CANYON

An abandoned borax mine in Tick Canyon, near Lang, California, is one of the happy hunting grounds for Southern California mineral collectors. Each new trip into this vicinity yields newer finds to add to the list of Tick Canyon minerals.

The most famous mineral which heads the list is *Howlite,* a hydrous calcium silico-borate. Its compact, marble-like texture, its pretty patterns of white and black and its "softness of 4", has made it a favorite cutting material for the rockhound. Spheres, book-ends, slabs, cabochons, and other forms are cut from these massive nodules which can be found from the size of a pea to those too massive for one to carry. An interesting phase of some of the *Howlite,* is that some of the pieces picked up resemble silicified wood, even to the bark. Many collectors are of the opinion that wood was replaced by the *Howlite,* others believe that the specimens were thus formed beween the *Colemanite* seams.

Colemanite, a hydrous calcium borate, is found here in two different forms. One form is massive with perfect cleavage and the other is small, flat nodules containing beautiful radiating crystals.

Veatchite, which is rare, occurs with the *Howlite* and *Colemanite,* is a hydrous colcium borate, and is a one locality mineral, being only taken in Tick Canyon.

A hydrous sodium and calcium borate, namely *Ulexite,* occurs in large quantities associated with the radiating *Colemanite* and *Howlite.* This mineral is white, fibrous and silky in appearance. Its nodules look not unlike soft, glossy silk.

In one section of the mine, a deposit of *Aragonite* can be found, the *Aragonite* itself not so spectacular, but its beauty appreciated only when its phosphorescence viewed under the heat of the photoflood lamp.

Beyond the mine, Tick Canyon wends it way into a narrow trail, which will lead the curious investigator to hidden treasures. About one-quarter of a mile in, a large deposit of *Analcime* and *Natrolite* can be encountered. In the cavities of the *Rhyolite,* one will find delicate crystals of *Natrolite* that almost cover the tiny *Analcime* crystals. Both of these minerals are hydrous sodium and aluminum silicates. Farther up the canyon, one will come upon thousands of tiny *Quartz Geodes,* any found over one-half inch in diameter can be considered large.

In the hills surrounding the borax mine, other minerals may be found. Rhombohedral cleavages of *Calcite,* various types of *Agate*; such as fortification, banded and sagenitic, and geodes are common. Good polishing marble and cleavages of *Selenite* are less common.

About one mile past the mine, on the road leading to Acton, the many abandoned gold mines will sometimes yield small pieces of etched *Calcite* that fluoresce a beautiful green under the lamp.

From the gold mines into Acton, banded and fortification *Agate* and *Quartz Geodes* are so plentiful in some spots that you could load your gunny sack in one hour.

Most collectors spend only a few hours in the vicinity of the borax mine, leaving for other good spots. The writer is of the opinion that if enough time is spent in Tick Canyon, the list of minerals of that spot will be large and inviting.

COLLECTORS' KINKS

ATTRACTING ATTENTION TO DISPLAYS

By HARRY Y. DRAKE

When showing my collection to those not familiar with mineral specimens I found that the large number of items on display in my cases often caused bewilderment and confusion. Such a person would be at a loss to pick out anything of interest. Trying to solve this problem I hit upon an idea which has proved helpful. I took small red paper stars such as are often used on charts to denote perfect attendance or special merit, and placed one on the label of specimens which are of some special interest due to rarity, form, or other characteristic. These stars were soon noticed by visitors, and when their significance was explained led the observer to see and question, and get much more out of the experience than he would have without this aid.

Of course, too many specimens cannot be so marked, and I think one in every twelve is about the maximum. Map pins with colored heads may also be used in place of the stars if preferred.

With Our Dealers

John A. Grenzig, of Brooklyn, N. Y., informs us that it is getting very difficult to obtain Estwing pick hammers from the factory—that after his present stock is exhausted no more may be obtained for some time. Collectors, if you need a hammer, order it right away before it is too late. An Estwing pick hammer makes a nice Christmas present!

Frederick Currier, Jr., of Meredith, N. H., had such good results from his September advertising that he is with us again this month. He is featuring an iron special in this issue. Every collector needs iron—in his blood and in his collection! Get yours today!

Hatfield Goudey is with us again this month. Notice his new address—P. O. Box 401, Yerington, Nev. It was formerly Jamestown, Calif. Look his ad up to see what he is offering—perhaps it's something you may want for your collection!

Another dealer who is with us again is W. Scott Lewis, of Hollywood, Calif. Mr. Lewis has been vacationing high up in the mountains of his state—and collecting at the same time. His large stock has been thus enriched with many desirable specimens which would look good in your collection! Rush him an order today!

The Schortmanns, of Easthampton, Mass., are preparing to hold another Exhibition Sale in New York City, next month. If you don't believe us—read their ad on the 3rd cover of this issue.

Ward's Natural Science Est., Inc., of Rochester, N. Y., have just released Catalog 42 covering minerals, rocks, soils, and index fossils. This is a 50-page, 6½ x 9¼ publication (29 pages on minerals, 10 on rocks, 1 on soils, and 6 on fossils) in which all items are listed alphabetically. The minerals are graded chiefly into five groups, pound material, 3/4x3/4" in lots of 10, 1x2", 2x3", and 3x4". The black and gray cover (front and back) is almost entirely given over to a picture of a graphic granite—a most remarkable likeness to a good specimen from the Bedford, N. Y., quarries. If you are not on Ward's mailing list, look their ad up and when sending in an order for some of their fine specimens, request a copy of the catalog.

George T. Manning, of New York City, who specializes in Australian opals, has a large supply of this attractive gem mineral (in rough and cut stones) which he is offering to *dealers only* and only in large quantities.

A Question and Answer Department

Beginning with the December issue, we shall open up a Question and Answer Department since a number of readers have requested it. Answers will be given only to questions of general interest.

Clubs Affiliated With the Rocks and Minerals Association

ARIZONA

Mineralogical Society of Arizona
Geo. G. McKhann, Sec.. 909 E. Willetta Street, Phoenix.
Meets at the Arizona Museum in Phoenix on the 1st and 3rd Thursday of each month.

CALIFORNIA

East Bay Mineral Society
Miss Nathalie Forsythe, Sec., 1719 Allston Way, Berkeley.
Meets on the 1st and 3rd Thursdays of each month (except July and August), at 8:00 p.m., in the Lincoln School Auditorium, 11th and Jackson Sts., Oakland.

Northern California Mineral Society, Inc.
L. M. Demrick, Sec., 424 Ellis St., San Francisco.
Meets on the 3rd Wednesday of the month at the Public Library in San Francisco.

Pacific Mineral Society
Mrs. Maude Oke, Sec., 9115 S. Harvard Blvd., Los Angeles.
Meets on the 2nd Friday of each month at 6:30 p.m., at the Hershey Arms Hotel, 2600 Wilshire Blvd., Los Angeles.

Southwest Mineralogists
Dorothy C. Craig, Corres. Sec., 4139 S. Van Ness Ave.. Los Angeles.
Meets every Friday at 8:00 p.m., Harvard Playground, 6120 Denker Ave., Los Angeles.

COLORADO

Canon City Geology Club
F. C. Kessler, Sec.. 1020 Macon Ave., Canon City.
Meets on the 1st and 2nd Saturdays of each month at 9:00 a.m. in the High School Building, Canon City.

Colorado Springs Mineralogical Society
Mrs. Helen S. Caldwell, Secretary, 221 N. 14th, Colorado Springs.
Meets usually at the Lennox House, Colorado College Campus, Colorado Springs, on the 2nd Monday, of each month at 7:30 p.m.

CONNECTICUT

Bridgeport Mineral Club
Miss Georgianna Seward, Sec., 2859 Main St., Bridgeport.
Meets in the Bridgeport Public Library on the 3rd Monday of the month.

Mineralogical Club of Hartford
Frank P. Rockwell, Secretary, 88 Fern St., Hartford
Meets the 2nd Wednesday of each month, at 8:00 p.m.. at 249 High St., Hartford.

New Haven Mineral Club
Mrs. Lillian M. Otersen, Sec., 16 Grove Place, West Haven.
Meets on the 2nd Monday of the month at the Y. W. C. A. on Howe St., New Haven.

IDAHO—OREGON

Snake River Gem Club
Mrs. A. Ingraham, Sec., Box 714, Ontario, Ore.
Meets alternately in Payette, Idaho, and Ontario, Oregon, (two small cities on the Snake River) on the 3rd Tuesday of every month.

ILLINOIS

Junior Mineral League
William Dacus, Sec., Morgan Park Junior College, 2153 W. 111th St., Chicago.

MAINE

Maine Mineralogical and Geological Society
Miss Jessie L. Beach, Sec., 6 Allen Avenue, Portland.
Meets last Friday of the month at 8 p.m., at the Northeastern Business College, 97 Danforth Street, Portland.

MARYLAND

Natural History Society of Maryland
2103 N. Bolton Street, Baltimore.
Office hours, Tuesdays and Fridays, 10:00 a.m. to 5:00 p.m.

MASSACHUSETTS

Boston Mineral Club
Mrs. Grace G. Dearborn, Sec., 40 Mt. Vernon St., Cambridge.
Meets on the 1st Tuesday of the month at 8:00 p.m.. at the New England Museum of Natural History, 234 Berkeley St., Boston.

Connecticut Valley Mineral Club
Mary E. Flahive, Secretary, 96 South St., Florence
Meets on the 1st Tuesday of each month at 8 p. m. at various institutions in the Connecticut Valley.

MISSOURI

National Geologist Club
Mrs. D. P. Stockwell, Pres., Mt. Olympus, Kimmswick.

NEVADA

Reno Rocks and Minerals Study Club
Mrs. Rader L. Thompson, Sec., Box 349, R2. Reno.
Meets on the 1st Wednesday of each month, at 7:30 p.m., at the Mackay School of Mines, Reno.

Western Nevada Mineral Society
Miss Helen Griffing, Sec., 231 Mary St., Reno.
Meets on the 2nd Wednesday of each month at 7:30 p.m., at the State Bldg., Reno.

NEVADA

Mineralogical Society of Southern Nevada
Paul Mercer, Acting Secretary, Bureau of Mines, Boulder City.
Meets on the 2nd Monday of each month at Las Vegas High School and on the 4th Monday of each month at Boulder City High School—both meetings at 8:00 p.m.

NEW JERSEY

Newark Mineralogical Society
Louis Reamer, Secretary, 336 Elizabeth St., Orange.
Meets on the 1st Sunday of the month at 3 p.m. at Junior Hall, corner Orange and North 6th Streets, Newark.

New Jersey Mineralogical Society
O. B. J. Fraser, Sec.-Treas., 27 Stoneleigh Park, Westfield.
Meets on the 1st Tuesday of the month at 8 p.m. at the Plainfield Public Library.

NEW MEXICO

New Mexico Mineral Society
R. M. Burnet, Sec.-Treas., Carlsbad.

Society of Archaeology, History and Art
Carlsbad.

NEW YORK

Chislers, The
Miss Evelyn Waite, Sponsor, 242 Scarsdale Road, Crestwood, Tuckahoe.

Queens Mineral Society
Mrs. Edward J. Marcin, Sec., 46-30—190th Street, Flushing.
Meets on the 1st Thursday of the month at 8 p.m. at 8501 - 118th St., Richmond Hill.

OKLAHOMA

Oklahoma Society of Earth Sciences
W. P. Smiley, Sec.Treas., 229 W. Jefferson Street, Mangum.
Meets on the 2nd Tuesday of each month, at 7:30 p.m., at the Historical Museum, Mangum.

PENNSYLVANIA

Thomas Rock and Mineral Club
Mrs. W. Hersey Thomas, Pres., 145 East Gorgas Lane, Mt. Airy, Philadelphia.
Meets on the 3rd Friday of each month, at 8:00 p.m., at the home of its president, Mrs. Thomas.

VERMONT

Mineralogical Society of Springfield
Victor T. Johnson, Sec., 11 Elm Terrace, Springfield.
Meets on the 3rd Wednesday of each month at 8:00 p.m. at the homes of members.

WASHINGTON

Gem Collectors Club
Mrs. Lloyd L. Roberson, Sec., 522 North 70th Street, Seattle.
Meets on the 1st and 3rd Tuesday of each month (except during the summer) at 8:00 p.m., at the Y. M. C. A.

Washington Agate and Mineral Society
Monroe Burnett, Sec., 802 S. Central St., Olympia.
Meets on the 1st Monday of the month, at 7:30 p.m. at the home of some member.

WISCONSIN

Wisconsin Geological Society
Milwaukee Public Museum, Milwaukee, Wisc.
Meets on the 1st Monday of each month at 8:00 p.m., at the Public Museum in Milwaukee.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933
Of ROCKS and MINERALS published MONTHLY at PEEKSKILL, N. Y., for OCTOBER 1st, 1942, — State of New York, County of Westchester.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared PETER ZODAC, who, having been duly sworn according to law, deposes and says that he is the EDITOR and PUBLISHER of ROCKS and MINERALS and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

1 That the name and address of the publisher, editor, managing editor, and business manager is PETER ZODAC, PEEKSKILL, N. Y.

2 That the owner is: PETER ZODAC, PEEKSKILL, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: NONE.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affidavit's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affidavit has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

PETER ZODAC.

Sworn to and subscribed before me this 1st day of October, 1942.
GWENDOLYN BROWN,
My commission expires March 30, 1944.

Bibliographical Notes

Mountains. By Carroll Lane Fenton and Mildred Adams Fenton.

Many of us have climbed mountains or have stood in awe at the base of some towering peak—still others have seen them from a distance. How were these mountains formed?—how old are they?—what type of rocks are they composed of? These and many other questions often crowd one's mind as he or she tries to picture, mentally, the makeup and history of some mountain.

The Fentons will answer these questions for you in their fascinating new book, *Mountains.* They tell you how mountains have been made, what they consist of, how many have been worn down by glaciers and other agencies. Furthermore, they tell you what plants, flowers, and trees grow on them, what animals and birds inhabit them—they tell you all this and many other interesting facts.

One of the interesting features of the book is that some of the famous mountains of the West are described—mountains which the Fentons have personally visited and climbed.

This blue-covered, 160-page book, with 63 photographs (2 in color) and drawings is a fit companion for the authors' previous *Rock Book* which has had a wide sale. *Mountains* was released on September 25, 1942. Its price is $2.50 per copy and it is published by Doubleday, Doran, 14 W. 49th St., New York City.

Bullets and Bombs from Space.

This is a pamphlet of 12 pages but it contains about the clearest, simplest, and most truthful explanation of meteorites that we have ever seen in print. One feature of unusual interest is that part devoted to the selling value of newly found meteorites.

This intensely interesting pamphlet costs but 10c. It is published by the Fels Planetarium, Franklin Institute, The Parkway, Philadelphia, Penn.

National Speleological Society Bulletin.

Bulletin No. 4, September, 1942, issue (64 pages) contains a number of interesting articles on various caves, on cave fauna, animal life of caves, caves foi archives (a most timely topic for the storing of valuable documents, priceless articles, etc., as a protection against air-raids), commercial caves, etc.

This interesting bulletin of a society devoted to caves and cave exploring costs but 50c per copy. It may be obtained from the Editor, Don Bloch, 5606 Sonoma Road, Bethesda, Md.

Geology of the Appalachian Valley in Virginia. By Charles Butts.

Part I—Geologic Text and Illustrations.

Part II—Fossil Plates and Explanations.

The Appalachian Valley in Virginia comprises the long but relatively narrow part of the State lying northwest of the Blue Ridge northeast of Roanoke and the northwest slope of the mountainous Blue Ridge province southeast of Roanoke.

This report is in a sense the summation of the geologic studies of the author in the Appalachian Valley from New York State to Alabama, inclusive, during a lifetime of field research and surveying devoted to that vast region with its complex problems.

Part I consists of the geologic text and illustrations of the topography, stratigraphy, and structure of the Valley. It contains 568 pages, 63 fine plates, and 10 figures.

Part II consists of 72 full page plates of Paleozoic fossils from the described formations with accompanying brief explanatory text, including descriptions of some new species (1959 figures from original photographs and 592 named species). The total number of pages are 271.

Issued by the Virginia Geological Survey, University Station, Charlottesville, Va. Parts I and II, $1.50 (Part I not sold separately); Part II available at 50c.

Virginia's War Mineral Resources. By Arthur Bevan.

This 18-page pamphlet describes briefly some of the important mineral deposits of the state among which are manganese, titanium, zinc, pyrite, coal, natural gas, petroleum, limestone, dolomite, salt, gypsum, barite, kyanite, cement rock, soapstone, and talc. Ten plates illustrate the text.

Issued by the Virginia Geological Survey, University Station, Charlottesville, Va.

PUBLISHER'S CATALOG . . . . . .

The new 1942-1943 catalog of technical books (64 pages) of the Chemical Publishing Co., Inc., 234 King Street, Brooklyn, New York has just come off the press. The new format was especially designed to enhance its utility and efficiency. Sections have been subdivided so that needed books or books on similar subjects can be found in a minimum time.

Every important field has been covered—Aviation, Engineering, Radio, Electricity, Mechanics, Chemistry, Formulas, Military and Naval Sciences and Dictionaries (Spanish, Russian, French, German), etc.

These books will be very helpful to students, teachers, the Armed Forces—and the

technical staffs and workers engaged in war production.

Included in the catalog are the Spanish and Portuguese books of Editorial Tecnica Unida, the Spanish subsidiary of the Chemical Publishing Co., Inc.

A copy will be sent to anyone—upon request.

Tri-County News Mica Edition.

The Tri-County News of Spruce Pine, N. C., a weekly newspaper of Western North Carolina, in its issue of Sept. 24, 1942, had a special edition of 32 pages devoted to the mica deposits of its area. As many mineral collectors know, Spruce Pine is world-famous for its minerals of which mica is but one (mica is mined here in large quantities).

The special mica edition of *Tri-County News* describes many of the mica mines of the area, oftentimes giving a brief history of them, and with a number of interesting illustrations tend to make this issue of much importance to mineral collectors.

Our congratulations are extended to the Editor of *Tri-County News* and to his staff for this excellent and most interesting mica edition. We are very sure that many of our readers will want to obtain copies of this edition. Many extra copies have been issued and the price is only 10c each.

COMMERCIAL Minerals of California .. ..

Revised articles on the following of this series of papers by Geo. L. Gary, are now ready for distribution:

MANGANESE
ANTIMONY
TIN
ZIRCONIUM

The other minerals on which articles are available are as follows:

Aluminum
Andalusite - Dumortierite - Kyanite - Sillimanite (one paper)
Arsenic
Asbestos
Barium
Bentonite
Beryl
Bismuth
Borates
Cadmium
Chromite
Cobalt
Copper
Diamonds and Graphite (one paper)
Diatomite
Feldspar
Fluorspar
Gold
Gypsum
Iodine
Iron
Lead
Limestone
Magnesite
Magnesium
Mica
Molybdenum
Monazite and Allanite (one paper)
Nickel
Nitrates
Phosphate and Phosphate Rock
Platinum
Quartz
Quicksilver
Silver
Strontium
Sulfur and Pyrite
Talc
Titanium
Tungsten
Vanadium
Zinc

These articles cover properties, uses, preparation, occurrences, tests, markets, references, and possible buyers.

Copies are mailed from the main office of the Division in San Francisco on receipt of 3c each, mailing charge. They may be obtained free at the branch offices of the Division as well as in San Francisco. These are State Building, Los Angeles; State Office Building, Sacramento; and care Chamber of Commerce, Redding.

Supplement No. 2 to Bulletin 113 is a mimeographed list of minerals *arranged according to elements*. Supplement No. 1 is a list by counties. These may be obtained on the same basis as the above; that is free if called for, 3c handling charge if mailed.

Specifications and prices on Chrome and Manganese Ores; and on Tungsten Ores, to be purchased by the Metals Reserve Company, Washington, D. C. for government stockpile purposes, in mimeographed form—available on request.

Additional of our references on Chromium: A map showing chromite deposits in California—price 60c plus 2c sale tax. An article on Chromium by Chas. V. Averill, covering the economic status, its marketing, milling, metallurgy, and geology. This is in the January, 1942, issue of the California Journal of Mines and Geology. In the January, 1941, issue is an article on Geologic Investigation of the Chromite Deposits in California—101 pages. Both chapters are available at 60c each plus 2c sales tax.

Explanation of the Reconstruction Finance Corporation plan to make *preliminary development loans* for mining strategic minerals, and the part to be played by this Division, is available here on request.

Antimony Abstract: For sale at 25c plus 1c sales tax. 26 pages including index map—mimeographed.

Iron Abstract: For sale at 35c plus 1c sales tax. 26 pages including index map—mimeographed.

Some Minerals of Louisiana

(Continued from page 379)

Iron-bearing deposits in Bossier, Caddo, and Webster Parishes, Louisiana. By Ernest F. Burchard, U. S. Geol. Survey Bull. 620 (Contributions to Economic Geology, 1915), Washington, 1916, pp. 120-150.

Louisiana Conservation. (A collection of brief addresses). Department of Conservation, State of Louisiana.

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History and Geology of the Royal Gorge, an illustrated souvenir booklet with maps and drawings locating 54 minerals for touring collectors. 50c postpaid. F. C. Kessler, Canon City, Colo.

Gems and Gem Materials—Fourth edition ready. Complete and Authoritative. New Price $3.00. Write for 1943 price list of American gem rough. Sample sack 10c. Gem Exchange, Lake Bluff, Illinois.

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